

WHAT IS CLAIMED IS:

1. A hydrogen operated power system provided with a supply system which supplies a gaseous fuel from a fuel supply tank to a hydrogen operated power source, characterized by comprising:
- 5 a pump provided in the supply system, which is driven by a sensorless motor having no sensor that detects at least a rotational position of the motor.
2. The hydrogen operated power system according to claim 1, characterized in that the supply system circulates the gaseous fuel supplied from the fuel supply tank to the hydrogen operated power source via a circulation path so as to supply the gaseous fuel to the hydrogen operated power source, and the pump circulates the gaseous fuel in the circulation path.
- 10 3. The hydrogen operated power system according to either claim 1 or claim 2, characterized by further comprising:
- abnormality detecting means for detecting a plurality of types of different abnormalities related to driving the motor; and
- abnormality determining means for determining that an abnormality has occurred in the supply system when an abnormality, regardless of type, has been detected a predetermined number of times by the abnormality detecting means after an instruction has been given to start the motor until a predetermined period of time has passed.
- 20 4. The hydrogen operated power system according to claim 3, characterized in that the supply system is provided with a check valve mounted on a discharge side of the pump, and the abnormality determining means determines sticking of the check valve to be an abnormality in the supply system.
- 25 5. The hydrogen operated power system according to claim 4, characterized in that outside air temperature detecting means for detecting an outside air temperature is further provided, and the abnormality determining means determines whether the check valve is stuck based on the outside air temperature detected by the outside air temperature detecting means.
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6. The hydrogen operated power system according to either claim 4 or claim 5, characterized in that pressure detecting means for detecting a pressure on the discharge side of the pump is further provided, and the abnormality determining means determines whether the check valve is stuck based on the pressure detected by the pressure detecting means.

7. The hydrogen operated power system according to any one of claims 3 to 6, characterized by further comprising:  
system stopping means for stopping the system when it has been determined by the abnormality determining means that there is an abnormality in the check valve.

8. The hydrogen operated power system according to any one of claims 3 to 7, characterized by further comprising:  
restart instructing means for instructing the system to restart when an abnormality has been detected by the abnormality detecting means, until it is determined by the abnormality determining means that there is an abnormality in the supply system.

9. The hydrogen operated power system according to either claim 1 or claim 2, characterized by further comprising:  
abnormality detecting means for detecting a plurality of types of different abnormalities related to driving of the motor; and  
system stopping means for stopping the system when an abnormality, regardless of type, has been detected a predetermined number of times within a predetermined period of time by the abnormality detecting means.

10. The hydrogen operated power system according to claim 9, characterized by further comprising:  
restart instructing means for instructing the system to restart when an abnormality has been detected by the abnormality detecting means, until the system is stopped by the system stopping means.

11. The hydrogen operated power system according to any one of claims 3 to 10, characterized in that the abnormality detecting means detects, as one of the plurality of abnormalities, at least one of an overcurrent abnormality in the motor, a short-circuit current abnormality in an element in the motor, and a lock abnormality in the motor.

12. The hydrogen operated power system according to any one of claims 1 to 11, characterized in that the hydrogen operated power source is a fuel cell.

13.. The hydrogen operated power system according to any one of claims 1 to 11, characterized in that the hydrogen operated power system is a hydrogen engine.

14. A hydrogen operated power system, characterized by comprising:  
a supply system which supplies a gaseous fuel from a fuel supply tank to a hydrogen operated power source; and  
a pump provided in the supply system, which is driven by a sensorless motor having no sensor that detects at least a rotational position of the motor.